

## REMARKS

Applicants respectfully traverse and request reconsideration.

The drawings have been objected to and formal drawings are being submitted to the draftsman under separate cover and are attached herewith for approval by the Examiner. The drawings have been objected to for allegedly failing to include certain reference numerals. Applicants have added item "14a" in Figure 1, but note that the other objections as to page 11 should respectfully be withdrawn since these reference numerals do appear in the drawings and in particular, are shown in Figure 2. In addition, Applicants have amended Claim 2 to clarify a typographical error with reference to character "20a."

Claims 5-6, 8, 13-14, 15-19, and 20 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The Office Action alleges that the limitation "the trust anchor modification data" does not have sufficient antecedent support. Applicants have amended the claim to correct a typographical error and note that the trust anchor modification data is provided by the anchor modification data certificate issuer and as such adequate support appears to be present in the claim.

As to Claims 8 and 13, the Office Action objects to the use of the words "subordinate authority memory" as allegedly not having proper antecedent basis. However, Applicants respectfully note that these claims are the first claims to introduce this memory as a required limitation and as such, the introduction of the term does not need antecedent basis. Accordingly, Applicants respectfully request that this rejection be withdrawn.

Claims 1-22 stand objected to due to apparent informalities. Applicants have amended the claims to correct for typographical errors. However, Applicants respectfully submit that the word "an" before the word "inter trusted" and the letter "a" before the word "dynamically"

would not be proper grammar since data may be singular or plural and the letter “a” would be improper grammar if placed before an adverb. Accordingly, Applicants respectfully request that these objections be withdrawn.

Claims 1-21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,315,657 (Abadi). Abadi is directed to compound principals in access control lists wherein a global naming service is used which is a depository of principal names, their associated public keys and other relevant security information. These principals are referred to as certifying authorities. As explained in Column 7, the certification authorities can be in a hierarchy, however, the Abadi reference teaches the use of conventional verification techniques and cross certification among differing certification authorities. As described in Column 8, when a principal wishes to authenticate a message, it utilizes conventional look up techniques to look up a certificate signed by a CA naming its originating CA and then evaluates the next CA in the hierarchy. See Column 8, lines 11-36.

The Office Action cites Column 7, lines 66-68 and Column 8, lines 1-2 as allegedly teaching a superior authority that is operative to generate an inter trust authority modification data to dynamically vary validating starting authorities among the subordinate authorities. However, the cited section merely indicates that cross certification occurs among different authorities. The starting authority among inter subordinate authority is constant in the Abadi reference. There is no generation of inter trust authority modification data to change the starting authority amongst subordinate authorities as set forth in Applicants’ claim. No generation of trust modification data is claimed. To the contrary, it appears that Abadi teaches that once the trust is established, no modification is controlled by the superior authority. As such, Claims 1 and 15 are believed to be allowable.

As per Claims 2 and 16, the Office Action cites Column 7, lines 48-65 and Column 8, lines 12-44 as allegedly teaching a subordinate authority that issues a certificate responsive to the inter trust authority modification data that issues a certificate for at least one subscriber based on the inter trust authority modification data. However, the cited portions of the reference merely indicate that there is a hierarchical certificate authority structure and that a principal merely looks up a certificate signed by a CA along the hierarchy so a chain of certificates can be obtained so that the principal knows that the message or information can be trusted. This is consistent with conventional certificate chain on a checking technique.

In contrast, Applicants claim that a subordinate authority issues certificates in response to inter trusted authority modification data from a trusted authority, namely a superior authority in the hierarchy, and issues a certificate based on the inter trusted authority modification data. Hence the trust authority must be changed as required in the claim based on the inter trusted authority modification data. Such change in trust authority is not taught or suggested by the cited reference and no mechanism for doing so is claimed. Accordingly, these claims are also believed to be in condition for allowance.

As to Claims 3 and 17, Applicants respectfully reassert the relevant remarks made above.

As to Claim 9, Applicants respectfully reassert the relevant remarks made above with respect to Claims 1-3.

As to Claims 4, 10 and 18, Applicants respectfully reassert the relevant remarks made above.

As to Claims 5, 11 and 19, the Office Action cites Column 7, lines 50-53 and Column 8, lines 42-44 as allegedly teaching that a superior authority includes a trust anchor modification data certificate issuer that provides trust anchor modification data as a signed data structure for

subordinate authorities. As explained in Applicants' Specification, trust anchor modification data may indicate for example that the trust anchor for a given subscriber may be modified or the trust anchor for a given subordinate authority may be modified. This can be done, for example, through a certificate store in a repository. The trust anchor for a given subscriber may be modified by a subordinate authority without requiring action by the superior certification authority. Hence, Applicants' system allows for variation of trust anchors for a subscriber to facilitate trust adjustment in response to compromises to a certification authority in the hierarchy. The cited portions of Abadi merely state that there is a directory which contains certificates of the various certification authorities. Applicants, as noted above, are unable to find any trust modification data described in Abadi. If the rejection is maintained, Applicants respectfully request a showing of the same.


As to Claims 6, 12 and 20, the claims require among other things that the trust anchor modification data include at least one of subordinate authority cross certification allowance data indicating for example whether a subordinate authority can cross certify with another authority, the scope of certification data and other information affecting the trust anchor that is identified through the trust anchor certificate issued by superior authority. Such a certificate is not described or generated in the Abadi reference as the Abadi reference does not seek to alter the trust anchors in the hierarchical structure, but merely appears to teach how to obtain certificates in existing chains when verifying a signature or received data. Accordingly, these claims are in condition for allowance.

As to Claims 7 and 13, Applicants respectfully reassert the relevant remarks made above with respect to Claims 1 and 12.

As to Claims 8, 14 and 21, there is no inter trusted authority trust modification data communicated in the Abadi system. Accordingly, these claims are also believed to be in condition for allowance. If the rejection is maintained, Applicants respectfully request identification by column and line number of what the Examiner is purporting to be Applicants' claimed "inter trusted authority trust modification data" as taught in Abadi.

Accordingly, Applicants respectfully submit that the claims are in condition for allowance and that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact the below-listed attorney if the Examiner believes that a telephone conference will advance the prosecution of this application.

Respectfully submitted,

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Date: June 24, 2003

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